

AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated hereafter. [Use ~~strikethrough~~ for deleted matter (or double square brackets "[[]]" if the strikethrough is not easily perceivable, i.e., "4" or a punctuation mark) and underlined for added matter.]

1-2. (Canceled)

3. (Previously presented) A method according to claim 9, wherein the step of performing an analysis of the image further comprises identifying a predefined image class wherein, in that image class, sub-parts of the image have predefined characteristics, and establishing index frames based on a close-up view of each identified sub-part, the step of generating the video data comprising executing an algorithm for determining a display path from one index frame to the next.

4. (Original) A method according to claim 3, wherein, in the step of generating the video data, the algorithm further determines at least one of (a) the order of the index frames to be displayed, (b) the amount of time for which each index frame is displayed, and (c) the nature of the transition between each index frame.

5. (Original) A method according to claim 3, wherein the step of identifying the predefined image class having sub-parts with predefined characteristics comprises identifying regions of interest and performing a feature recognition operation.

6. (Original) A method according to claim 5, wherein the step of performing feature recognition identifies human facial features, the step of establishing index frames thereafter comprising forming index frames based on a close-up view of the identified facial features.

7. (Original) A method according to claim 6, wherein, having identified human facial features, the step of performing feature recognition further comprises comparing the facial features with a database of pre-stored facial features such that the step of forming index frames is performed only for those facial features already present in the database.

8. (Original) A method according to claim 6, wherein the step of generating the video data to establish a display path comprises determining the orientation of the facial features identified, and generating a display path which follows the general gaze direction which the facial features exhibit.
9. (Currently amended) A method of displaying a digital image, the method comprising:
acquiring a set of image data representative of a displayable static image;
using a processing means to perform an analysis of the image data to identify characteristics of the image content to determine which of a number of predefined image characteristics are present in the image;
identifying, by executing an algorithm in the processing means, a predefined image class wherein, in that image class, there is at least one dominant edge, line or curve;
executing an algorithm, in the processing means, associated with those characteristics identified, the algorithm defining a rule or rules for generating a moving viewpoint over the image for display to determine the moving viewpoint without input from a user;
executing an algorithm in the processing means, for determining a display path following the at least one dominant edge, line or curve using the determined moving viewpoint; and
generating, in the processing means, a set of video data for output to a display device connected to the processing means, the video data representing displayable motion over the static image and being generated in accordance with the image content characteristics
10. (Currently amended) A method of displaying a digital image, the method comprising:
acquiring a set of image data representative of a displayable static image;
using a processing means to perform an analysis of the image data to identify characteristics of the image content to determine which of a number of predefined image characteristics are present in the image, wherein performing an analysis of the image further comprises:
(a) identifying a predefined image class wherein, in that image class, there are both (i) image sub-parts having predefined characteristics, and (ii) dominant edges, lines or curves; and
(b) establishing index frames based on a close-up view of each identified image sub-part in (i);

executing an algorithm, in the processing means, associated with those characteristics identified, the algorithm defining a rule or rules for generating a moving viewpoint over the image for display to determine the moving viewpoint without input from a user;

executing an algorithm, in the processing means, for determining a display path moving between each index frame and following the dominant edges, lines or curves using the determined moving viewpoint; and

generating, in the processing means, a set of video data for output to a display device connected to the processing means, the video data representing displayable motion over the static image and being generated in accordance with the image content characteristics

11. (Previously presented) A method according to claim 10, wherein, in the step of generating the video data, the algorithm defines rules having a first level and at least one sub-level, the rules in the first level relating to identification of a redefined image class and the rules in the at least one sub-level relating to options for generating the moving viewpoint for the image class identified, the method further comprising prompting the user manually to select an option in a sub-level.

12. (Previously presented) A method according to claim 10, wherein the step of generating the video data comprises generating video data for a plurality of video sub-clips, each sub-clip representing displayable motion over a different part of the static image, and wherein the method further comprises an editing step for linking the sub-clips to form a second set of video data.

13. (Previously presented) A method according to claim 10, wherein the image data is representative of a displayable photograph.

14. (Original) A method according to claim 13, wherein the generated video data is representative of a panning motion over the photograph, the initial and end frames representing salient parts of the image.

15. (Currently amended) A computer program stored on a computer-usable medium, the computer program comprising computer-readable instructions for causing the computer to execute the steps of:

acquiring a set of image data representative of a displayable static image;
analyzing the image data to identify characteristics of the image content;
determining a dominant edge, line or curve corresponding to the identified characteristics of the image content;
defining a rule or rules for generating a moving viewpoint over the image for display to determine the moving viewpoint without input from a user;
determining a display path moving between each index frame, the display path following the determined dominant edge, line or curve using the determined moving viewpoint; and
generating video data representing displayable motion over the static image and being generated in accordance with the image content characteristics, the video data generated by following the display path from one index frame to the next.

16-19. (Canceled)

20. (Currently amended) A computer system comprising:
- a data port that receives image data representative of a displayable static image;
 - a processor that:
 - analyzes the received image data to identify characteristics of the image content;
 - determines a dominant edge, line or curve corresponding to the identified characteristics of the image content;
 - defines a rule or rules for generating a moving viewpoint over the image for display to determine the moving viewpoint without input from a user;
 - determines a display path moving between each index frame, the display path following the determined dominant edge, line or curve using the determined moving viewpoint; and
 - generates a set of video data for output to a display device, the video data representing displayable motion over the static image and being generated in accordance with the image content characteristics; and
 - a video port that outputs the video data for display.

21. (Currently amended) A computer program stored on a computer-usable medium, the computer program comprising computer-readable instructions for causing a computer to execute the steps of:

- acquiring a set of image data representative of a displayable static image;
- determining a plurality of index frames corresponding to regions of interest of the static image;
- determining an order of display of the plurality of index frames;
- defining a rule or rules for generating a moving viewpoint over the image for display to determine the moving viewpoint without input from a user;
- determining a display path moving between each index frame using the determined moving viewpoint, the display path following the determined order of display; and
- generating video data representing displayable motion over the static image and being generated in accordance with image content characteristics, the video data generated by following the display path from one index frame to the next.

22. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the steps of:

- displaying the generated video data;
- displaying the static image with the index frames indicated thereon; and
- displaying the display path thereon.

23. (Currently amended) A computer program stored on a computer-usable medium, the computer program ~~The computer program of claim 22, further~~ comprising computer-readable instructions for causing the computer to execute the steps of:

- acquiring a set of image data representative of a displayable static image;
- determining a plurality of index frames corresponding to regions of interest of the static image;
- determining an order of display of the plurality of index frames;
- determining a display path moving between each index frame, the display path following the determined order of display;
- generating video data representing displayable motion over the static image and being generated in accordance with image content characteristics, the video data generated by following the display path from one index frame to the next;

displaying the generated video data;
displaying the static image with the index frames indicated thereon;
displaying the display path thereon;
receiving an instruction for a user deleting one of the plurality of index frames; and
determining a second order of display of the plurality of remaining index frames such that the deleted index frame is not displayed.

24. (Currently amended) A computer program stored on a computer-usable medium, the computer program ~~The computer program of claim 22, further~~ comprising computer-readable instructions for causing the computer to execute the steps of:

acquiring a set of image data representative of a displayable static image;
determining a plurality of index frames corresponding to regions of interest of the static image;

determining an order of display of the plurality of index frames;
determining a display path moving between each index frame, the display path following the determined order of display;

generating video data representing displayable motion over the static image and being generated in accordance with image content characteristics, the video data generated by following the display path from one index frame to the next;

displaying the generated video data;
displaying the static image with the index frames indicated thereon;
displaying the display path thereon;
receiving an instruction for a user changing the order of display of one of the plurality of index frames; and
determining a second order of display of the index frames corresponding to the changed order.

25. (Previously presented) The computer program of claim 22, further comprising computer-readable instructions for causing the computer to execute the steps of:

receiving an instruction for a user selecting a zoom for one of the plurality of index frames; and

determining a size of display of the selected index frames, the size corresponding to the selected zoom.

26. (Previously presented) The computer program of claim 22, further comprising computer-readable instructions for causing the computer to execute the steps of:

receiving an instruction for a user selecting a rate of movement between the index frames; and

determining a nature of transition between the index frames, the transition corresponding to the selected rate of movement.

27. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the step of determining the order of display of the plurality of index frames by panning for one side of the static image to the other side of the static image.

28. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the steps of:

determining a geometry of a scene of the static image; and

determining the order of display of the plurality of index frames by following the determined geometry of the scene.

29. (Currently amended) A computer program stored on a computer-usable medium, the computer program ~~The computer program of claim 21, further~~ comprising computer-readable instructions for causing the computer to execute the steps of:

acquiring a set of image data representative of a displayable static image;

determining a plurality of index frames corresponding to regions of interest of the static image;

determining an order of display of the plurality of index frames;

determining a display path moving between each index frame, the display path following the determined order of display;

generating video data representing displayable motion over the static image and being generated in accordance with image content characteristics, the video data generated by following the display path from one index frame to the next;

detecting a direction of gaze of at least one person in a scene of the static image, wherein the person is gazing at an object of interest shown on the static image; and

determining the order of display by displaying an index frame corresponding to the person and then displaying the object of interest where the direction of gaze of the person is directed at.

30. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the steps of:
selecting at least one smaller index frame; and
zooming-in on the selected index frame to increase display sized of the index frame.

31. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the steps of:
selecting at least one larger index frame; and
zooming-out on the selected index frame to increase display sized of the index frame.

32. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the step of displaying the static image by zooming out from a last index frame after the last index frame is displayed.

33. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the steps of:
determining a time period for display of the index frames, the time period predefined for the computer program; and
displaying each of the index frames for the determined time period before moving to a next index frame.

34. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the step of determining the display path by moving between a center of each index frame.

35. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the steps of:
determining a point on a person shown in each of the index frames; and
determining the display path by moving between the determined points.

36. (Previously presented) The computer program of claim 21, further comprising computer-readable instructions for causing the computer to execute the steps of;
recognizing an object around which the index frames are located; and
determining the order by fitting the index frames to a trapezoid such that the direction of display is around the recognized object.
37. (New) A method of displaying a digital image, the method comprising:
acquiring a set of image data representative of a displayable static image;
determining a plurality of index frames corresponding to regions of interest of the static image;
determining an order of display of the plurality of index frames;
determining a display path moving between each index frame, the display path following the determined order of display;
generating video data representing displayable motion over the static image and being generated in accordance with image content characteristics, the video data generated by following the display path from one index frame to the next;
displaying the generated video data;
displaying the static image with the index frames indicated thereon;
displaying the display path thereon;
receiving an instruction for a user changing the order of display of one of the plurality of index frames; and
determining a second order of display of the index frames corresponding to the changed order.
38. (New) The method of claim 37, further comprising:
receiving an instruction for a user selecting a zoom for one of the plurality of index frames; and
determining a size of display of the selected index frames, the size corresponding to the selected zoom.
39. (New) The method of claim 37, further comprising:
receiving an instruction for a user selecting a rate of movement between the index frames; and

determining a nature of transition between the index frames, the transition corresponding to the selected rate of movement.

40. (New) The method of claim 37, further comprising determining the order of display of the plurality of index frames by panning for one side of the static image to the other side of the static image.

41. (New) The method of claim 37, further comprising:
determining a geometry of a scene of the static image; and
determining the order of display of the plurality of index frames by following the determined geometry of the scene.

42. (New) A method of displaying a digital image, the method comprising:
acquiring a set of image data representative of a displayable static image;
determining a plurality of index frames corresponding to regions of interest of the static image;
determining an order of display of the plurality of index frames;
determining a display path moving between each index frame, the display path following the determined order of display;
generating video data representing displayable motion over the static image and being generated in accordance with image content characteristics, the video data generated by following the display path from one index frame to the next;
displaying the generated video data;
displaying the static image with the index frames indicated thereon;
displaying the display path thereon;
receiving an instruction for a user changing the order of display of one of the plurality of index frames; and
determining a second order of display of the index frames corresponding to the changed order.

43. (New) The method of claim 42, further comprising:
receiving an instruction for a user selecting a zoom for one of the plurality of index frames; and

determining a size of display of the selected index frames, the size corresponding to the selected zoom.

44. (New) The method of claim 42, further comprising:

receiving an instruction for a user selecting a rate of movement between the index frames; and

determining a nature of transition between the index frames, the transition corresponding to the selected rate of movement.

45. (New) The method of claim 42, further comprising determining the order of display of the plurality of index frames by panning for one side of the static image to the other side of the static image.

46. (New) The method of claim 42, further comprising:

determining a geometry of a scene of the static image; and

determining the order of display of the plurality of index frames by following the determined geometry of the scene.

47. (New) A method of displaying a digital image, the method comprising:

acquiring a set of image data representative of a displayable static image;

determining a plurality of index frames corresponding to regions of interest of the static image;

determining an order of display of the plurality of index frames;

determining a display path moving between each index frame, the display path following the determined order of display;

generating video data representing displayable motion over the static image and being generated in accordance with image content characteristics, the video data generated by following the display path from one index frame to the next;

detecting a direction of gaze of at least one person in a scene of the static image, wherein the person is gazing at an object of interest shown on the static image; and

determining the order of display by displaying an index frame corresponding to the person and then displaying the object of interest where the direction of gaze of the person is directed at.